



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

*Scott et al.* : Examiner: S. Yao  
U.S. Serial No. 10/723,537 : Group Art Unit: 1733  
Filed November 26, 2003 :  
Docket No. 3063.VIN :  
For: METHOD OF PRODUCING :  
LATEX BONDED NONWOVEN :  
FABRIC :  
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Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**DECLARATION UNDER 37 CFR 1.132**

Paul Scott, inventor of the subject matter of the above-noted patent application hereby declares:

1. That he was awarded a Batchelors degree in Chemistry from Kingston University (Surrey / Great Britain) and has worked in the field of Polymer Chemistry for 15 years, and that he is a co-inventor of the pending '028 application referenced above.
2. That the pending application is directed to a process for producing a nonwoven web for cigarette filters by an airlaid method, where a binder composition is added to the

web which includes at least one polymer and at least one stabilizing agent. That, generally, the inventive process provides cigarette filters which have high strength values, low amounts of dust, and meet regulatory requirements such as health codes.

3. That he understands from Counsel that the pending claims have been rejected over United States Patent No. 5,706,833 to *Tsugaya et al.* and United States Patent No. 5,927,287 to *Matsumura et al.*, and that he is familiar with the references referred to in making those rejections.
4. That he makes this *Declaration* on personal knowledge of the facts stated herein.
5. That claim 1 of the pending application, as amended, recites a binder composition which has at least one polymer composition and a stabilizing agent in amounts of from 1 to 15 parts per hundred weight monomer (“pphm”), based on the weight of the polymer. That the art cited by the Examiner, which is primarily directed to water soluble resins, utterly fails to suggest the process exemplified in the pending claims.
6. That, generally, a stabilizing agent is known in the art as a compound which stabilizes a polymeric dispersion during polymerization, *i.e.*, the stabilizer keeps the polymer phase separate from the continuous phase. That the stabilizing agents are present in minor amounts based on the weight of the monomer composition that is being polymerized. As stated in the pending application, the stabilizing agent is typically a protective colloid that is present in amounts of from 1 to 15 pphm.
7. Specifically, the *Tsugaya et al.* reference does not suggest to use a stabilizing agent in the binder composition. *Tsugaya et al.* lists water soluble resins which in some circumstances may be used as stabilizing agents (*e.g.*, polyvinyl alcohol); however, it teaches to use the resins in amounts and circumstances where they do not act as stabilizing agents, and are significantly higher than the 1-15 pphm range recited in claim 1. For example, when used in conjunction with other resins, *Tsugaya et al.* teaches to use the water soluble polymers in amounts of from 1.5 to 99 times greater

than the other resins. *See, Tsugaya et al.* at col. 9. When used in such amounts, the water soluble resins are not acting as stabilizing agents for the other polymers.

Similarly, the *Matsumura et al.* reference teaches to use a water soluble polymer in amounts (relative to any water insoluble polymers), that are not suggestive of a stabilizing agent. Additionally, there is no teaching in the references of record that the water soluble polymers are operative to stabilize a polymeric dispersion.

8. Both the *Tsugaya et al.* reference and the *Matsumura et al.* reference suggest to use the water soluble polymers in a binder composition in order to promote water disintegratability of the web. Where water *insoluble* resins are used, the references teach to use them in minor amounts. In contrast, the inventive binding compositions employ water insoluble resins that are stabilized with minor amounts of protective colloids. Accordingly, the webs of the invention generally do not disintegrate in water.
9. That claim 15 recites a method for making nonwoven webs for cigarette filters where the binder composition consists essentially of water, a synthetic polymer, and a protective colloid. Thus, the composition in claim 15 excludes additional components in amounts that would affect the basic characteristics of the invention, *e.g.*, meeting regulatory requirements. This represents a significant advancement because an effective emulsion or suspension binder can be provided to cigarette filters without including harmful surfactants. Similarly, claim 18 is directed to a binder composition which consists essentially of water, a water insoluble polymer, and a protective colloid. That, in addition to excluding harmful surfactants, claim 18 clearly distinguishes the *Tsugaya et al.* reference which discloses binders with a significant water soluble polymer content.
10. That claim 15 additionally recites that the polymer in the binder is prepared by either emulsion polymerization, inverse emulsion polymerization, or suspension polymerization, and where the dispersion is stabilized by a protective colloid. That the *Tsugaya et al.* and *Matsumura et al.* references, consistent with the utter lack of

suggestion to use stabilizing agent, do not teach to use a synthetic polymer that is prepared, and stabilized, according to the recited method.

11. The undersigned Declarant declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the subject application or any patent issuing thereon.

Dated 13<sup>th</sup> January 2006



Paul Scott